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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,937	11/17/2005	Andreas Lendlein	26538-0012	3650

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EXAMINER

ZEMEL, IRINA SOPHIA

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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06/06/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/534,937	Applicant(s) LENDLEIN ET AL.	
	Examiner Irina S. Zemel	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 11 and 12 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-5 and 11-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US patent 6,316,522 to Loomis et al., (hereinafter Loomis '522"), or 5,854,382 to Loomis, (hereinafter "Loomis '382").

The rejections stand as per reasons of record.

Claims 1-3, 5-and 11-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sawhney article.

The rejection stands as per reasons of record.

As discussed in previous office actions, both Sawhney and Loomis '382 disclose long polylactic segments (with DP of up to 40 in Sawhney, and up to 50 in Loomis '382). In addition, both Sawhney and Loomis discloses crosslinking the polymers and drying (or dehydrating) the crosslinked networks, at least for determination of water uptake as per disclosure of illustrative examples, thus disclosing dry polymeric network that are of substantially identical structure as the claimed networks.

Loomis '522 discloses substantially identical crosslinked polymers as Loomis '382, and similar illustrative example of dried networks. In addition, Loomis '522 discloses procedures of pre-crosslinking and post-crosslinking the polymers prior to

formation of hydrogels (see, for example, top of column 10, and also illustrative example disclosing dried networks)

While the reference does not expressly address the limitations of the newly introduced claims 11 and 12, and also the shape memory property of the claimed networks, it is reasonably believed that these limitations are inherently met by the disclosed dried networks as obtained from the block-copolymers having substantially similar chemical structure and molecular weights, and as obtained by substantially the same crosslinking mechanism as the networks disclosed in the instant specification.

In addition, it is noted that the claimed shape memory properties are not defined in any quantitative terms in any of the claims, with the exception of claim 11, thus, ANY degree of shape memory recovery property exhibited by the networks disclosed in the references meet the claimed "shape memory" property. Insofar as claim 11, the claims does not define what the "recovery" means and how it is measured, thus any "recovery" property exhibited by the disclosed networks meets this limitations, including elastic recovery at very low stretch ratio, etc.

The burden was shifted to the applicants to provide factual evidence to the contrary, however no evidence to that effect were ever presented..

Response to Arguments

Applicant's arguments filed 2-26-2008 have been fully considered but they are not persuasive. It is noted that the rejection of the claims is 102/103 rejection as allowed by the courts in cases where applicant claims a composition in terms of a

function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both **35 U.S.C. 102** and **103**, expressed as a **102/103** rejection. "There is nothing inconsistent in concurrent rejections for obviousness under **35 U.S.C. 103** and for anticipation under **35 U.S.C. 102**." *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977).

The applicants have chosen to argue each of the anticipation and obviousness rejections separately, placing the main emphasis on the rejections under 102.

Insofar as the applicants' arguments that "Substantially the same" structures can not anticipate the claimed invention, this argument is considered to be of no substance as directed to a matter of a semantic nature, rather than any substantive error in the rejection set forth by the examiner. In this sense, the arguments constitutes a non-responsive arguments as not particularly pointing out the error in the examiners rejection. It is quite clear from the record that the "substantially identical" as used by the examiner to describe features disclosed in the references that are not patentable distinct or clearly read on the claimed features. The examiner made the anticipatory rejection three times during the prosecution of the instant application (over the same two references), thus making it absolutely clear that the disclosed product is considered to be not patentably distinct from the disclosed products. The applicants fail to point oyr where the disclosed and the claimed products differ from each other.

The applicants argue that the '382 reference and the Sawhney reference disclose hydrogels as evident from the title of the article and columns 1, lines 57-58,

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and col. 6, lines 26-27 of the '382 patent which are obtained by a process different from the claimed process. Thus, as concluded by the applicants, the disclosed polymers have different properties from the polymers obtained from the claimed process (as per claim 6). While this may be so, it is noted that with exception of claim 11, NONE of The product claims require the claimed networks to have any specific "shape memory". The claimed limitation is met by ANY degree of recovery. The '382 patent expressly discloses that the films are crosslinked elastic films, thus inherently exhibiting at least some degree of recovery upon heat, or some degree of "shape memory". In addition, the claimed "recovery" is not even defined as "strain recover", much less as it was measured in the illustrative examples. This claimed "recovery" reads on any recovery, including elastic recovery, which is reasonable believed to be the inherent property of the disclosed highly elastic crosslinked polymers. Of course, variations in properties for polymers having different structures are expected (as even evident from the data of the instant application), and the specific example 5 of the '382 patent may have some different properties (it is noted that it is only one example of many suitable polymer network that have underlying polymers that differ from each other in the chemical structure and length of the respective blocks), however, the question is whether the disclosed networks inherently exhibit the properties of the **claimed** invention, and not the illustrative example of the instant specification. As discussed above, the claimed networks are only require to have quantitatively unspecified "shape memory" and be of amorphous nature, and comprise crosslinked ABA polymer. All of those limitations are either expressly or inherently (as discussed above) met by the disclosed dried networks,

regardless of whether “it is difficult to imagine” that any of the properties of the disclosed material is expressly discussed in any of the references or not.

Similarly, with respect to the applicants arguments with regard to Loomis '522 patent, the applicants have, again, chosen to discuss the differences between some specific embodiments of the reference and the properties of the product obtained via melt processing as in the illustrative examples of the instant application. Once again, it is noted that the examiner recognized that the prior art of record does not disclose the process that includes the step of irradiation of melt, and indicated claim 6 allowable. The properties of the products obtained from the melt, will, probably, be different at least in some respects from the properties of the products obtained via drying crosslinked networks disclosed in the prior art. However, the product claims as **CLAIMED**, do not have any specific limitations that can possibly distinguish the claimed products and the claimed product and the disclosed *dried crosslinked networks* of the prior art. Again, as discussed above, the “claimed “Shape memory” property is vague and not quantitatively defined in the claims to patentably distinguish the claimed product from the products of the prior art.

With respect to the applicants arguments of rejections under 35 USC 103 (as noted above, this rejection is a part of 102/103 rejection based on the fact that the specifically claimed property. i.e., shape memory, is not addressed in the reference), the applicants only add that there is no teaching or suggestion or motivation to modify the reference to remedy the deficiencies of the cited reference. No deficiencies are seen in the cited references with respect to the invention *as claimed* as discussed above. The

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alternative rejection was only used since the patent office is unable to actually evaluate whether or not the disclosed dry materials exhibit the claimed properties. The burden was shifted to the applicants to provide factual evidence that the disclosed products do not, in fact exhibit at least some degree of shape memory (for the claims that do not require any specific degree of recovery), and the specific recovery for claim 11, however, the applicants did not provide any evidence to that fact. The applicants chosen to argue that the hydrogels and aerogels disclosed in the references must have different properties from the products obtained by the crosslinking of melts. While this may be so, this arguments is not persuasive with respect to the claimed products as expressly discussed above. Specifically – the claims do NOT require any specific properties to be exhibited by the claimed networks, with the exception of “shape memory”, which, as discussed above, is NOT defined in any specific terms. The arguments, thus, are not commensurate in scope with the invention as CLAIMED.

The rejection, thus, stands as per reasons of record.

Claim 6 is still deemed allowable.

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1796

Irina S. Zemel
Primary Examiner
Art Unit 1796

ISZ